UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,892	05/26/2005	Joel Fournier	026032-4822	4206

26371 7590 02/22/2008
FOLEY & LARDNER LLP
777 EAST WISCONSIN AVENUE
MILWAUKEE, WI 53202-5306

EXAMINER	
FAROKHROOZ, FATIMA N	

ART UNIT	PAPER NUMBER
2889	

MAIL DATE	DELIVERY MODE
02/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/511,892	FOURNIER, JOEL	
	Examiner	Art Unit	
	FATIMA N. FAROKHROOZ	2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/19/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

The first electrode and the second electrode in claim 2 do not have strict antecedent basis to the independent claim 1. Correction is required. For purposes of art rejection, it is deemed that the first and second electrodes are the first rear electrode and the second rear electrode, respectively of claim 1 ,for all the claims dependant on claim 1.

The term complementary in claim 4 and in other claims does not give a clear meaning. Appropriate correction is needed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsumori (US 477402) in view of Tanabe et al (US 6252356).

Regarding claim 1, Mitsumori teaches a display device of the thin-film electroluminescent display type (Prior Art Fig.3), comprising: a first layer 8 having an electroluminescent material, a second layer forming a transparent front electrode 10 a third layer having at least one first rear electrode 6 , the first layer being between the second layer and the third layer, a fourth layer behind the third layer and having an electroluminescent material 4; and a fifth layer with at least one second rear electrode 2 (see col.1,lines 30-50) .

Mitsumori does not teach a fifth layer with at least one second rear electrode masking an area which is not covered by the first rear electrode.

In the same field of endeavor, the added Tanabe reference teaches a second rear electrode 26 (Fig.7) masking an area which is not covered by the first rear electrode 28 (col.5 ,line 52 to col.6,line 50,wherein the electrode area 26 is the area covered by the small portions 26A and 26B only and the electrode area 28 is the area covered by the small portions 28A and 28B only; Also see Abstract) in order to display multiple patterns (Abstract; claim 6, col.6,lines 50-57).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the display device, as disclosed by Tanabe, in the device of Mitsumori in order to display multiple patterns.

2. Regarding claim 2, Tanabe teaches a display device (Fig.7) ,wherein the second electrode 26 overlaps an edge of the first electrode 28 (see the portion wherein the electrodes 26A and 28B overlap). Also see rejection in claim 1 above. The same reason to combine art as in claim 1 applies.

3. Regarding claim 3, Mitsumori teaches a display device (Fig.1), wherein the first electrode 12 covers a surface corresponding to a display background and has at least one hollow area (hollow area between electrode portions 12 in Fig.1, col.3,lines 58 to col.4,lines 57 and lines 40-50).

Mitsumori does not teach the second electrode masking at least part of the said hollow area.

The added secondary Tanabe reference teaches the second electrode masking an area which is not covered by the first electrode (also see rejection in claim 1) in order to display multiple patterns.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the display device as disclosed by Tanabe, in the device of Mitsumori in order to display multiple patterns (Abstract; claim 6, col.6,lines 50-57). (Examiner Note: Examiner interprets masking as “covering” or “blocking the view of”).

4. Regarding claim 5, Tanabe teaches a display device, wherein the first and second electrodes may be activated so as to display no information (See col.5,lines 52 to col.6,lines 30, wherein the second electrodes may be activated so as to display no information) (Also see rejection in claim 1 above. The same reason to combine art as in claim 1 applies) .

5. Regarding claim 6, Mitsumori teaches a display device, wherein the electroluminescent layers are formed from an electroluminescent ink (col.3,lines 58 to col.4,lines 5, wherein the EL film is formed of manganese-doped zinc sulfide).

6. Regarding claim 7, Examiner note: the later portion of this claim relates to a process. The device not the process is considered germane to the claim, thus , examination will depend only on the structural limitation of **the electrodes.**

7. Regarding claim 8, Tanabe teaches a display device (Fig.7), wherein the electoluminescent material of the first layer (22A and 22B) and the fourth layer (19A and 19B) can be controlled such that no areas are visible between portions of the electroluminescent material controllable to display information (see col.8, col.2 and 3) in order to achieve multiple patterns or displays (see col.3,lines 37-67,also see col.5,lines 52 to col.6,lines 32).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsumori (US 477402) in view of Tanabe et al (US 6252356),further in view of Kono (US 6191764).

Regarding claim 4, the combined structure of Mitsumori and Tanabe teaches the invention set forth above (see rejection in Claim 1 above).

The above combination is silent regarding the first electrode having several hollow areas, and the fifth layer has second electrodes shaped so as to be complementary to the said hollow areas such that the first and second electrodes together mask all of the display background.

In the same field of endeavor, Kono teaches an organic Electroluminescent device wherein the electrode has several hollow areas (electrodes 19 in Fig.1; col.3,lines 20-31) in order for them to map with the pixel pattern (col.3,lines 20-31).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the electrode structure, as disclosed by Kono, in the device of the previous combination in order to map with the pixel pattern.

Further, the combination does not teach that the fifth layer has second electrodes shaped so as to be complementary to the said hollow areas such that the first and second electrodes together mask all of the display background. The previous combination teaches that the second electrodes mask the single hollow area of the electrode. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the second electrode to mask multiple hollow areas in order

to extend the display area, since duplication of the essential working parts of a device to provide an extension in the display area involves routine skill in the art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 -22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanabe (US 6252356).

9. Regarding claim 9, Tanabe teaches a display device (Fig.7) comprising: luminescent material (19, 22) ; electrodes (26,28) configured to control illumination of the luminescent material such that the luminescent material can be controlled to display information; wherein all of a display background can be controlled to be illuminated by luminescent material (see col.8, col.3,lines 38 to col.4,lines 67 and col.5,lines 53 to col.6,lines 50).

10. Regarding claim 10, Tanabe teaches a display device (Fig. 7), wherein the luminescent material comprises, a first layer comprising luminescent material (22); and a second layer comprising luminescent material (19); wherein the luminescent material of the first layer and the luminescent material of the second layer are separately

controllable (using text and background electrodes; see col.8, col.3,lines 38 to col.4,lines 67 and col.5,lines 53 to col.6,lines 50).

11. Regarding claim 11, Examiner note: the later portion of this claim relates to a process. The device not the process is considered germane to the claim, thus , examination will depend only on the structural limitation of **the luminescent material.**

12. Regarding claim 12, Tanabe teaches a display device (Fig.7), wherein the electrodes comprise a first electrode (18) associated with control of a section of luminescent material of the first layer ; a second electrode (26A) associated with control of the section of luminescent material of the first layer ; and a third electrode (26B) associated with control of a section of luminescent material of the second layer (illumination of the 2 EL layers by application of the 2 voltages are taught in col.6,lines 12 to 32).

13. Regarding claim 13, Tanabe teaches a display device (Fig.7), wherein the first electrode (18) is also associated with control of the section of luminescent material of the second layer (illumination of the 2 EL layers by application of the 2 voltages are implicitly taught in col.6,lines 12 to 32).

14. Regarding claim 14, Tanabe teaches a display device (Fig.7), wherein the second electrode (26A) is located in front of the first layer 22 and the second layer 19;

the first electrode (18) is located behind the first layer; and the third electrode (26B) is located behind the second layer 19 (see col.8 , also see col.6,lines 12 to 32).

15. Regarding claim 15, Tanabe teaches a display device (Fig.7), wherein the third electrode (26B) overlaps the first electrode (18).

16. Regarding claim 16, Tanabe teaches a display device (Fig.7), wherein the first layer has a first set of areas that can be controlled to be illuminated, the second layer has a second set of areas that can be controlled to be illuminated, and the first set of areas and second set of areas are complimentary (see col.6,lines 12 to 32).

17. Regarding claim 17, Tanabe inherently teaches a display device (Fig.7), wherein the luminescent material can be controlled such that no areas are visible between portions of the luminescent material controllable to display information (since the luminescent layers 19 and 22 appear as small patches, instead of a full layer of luminescent material).

18. Regarding claim 18, see rejection in claims 9 and 17.

19. Regarding claim 19, Tanabe teaches a display device (Fig.7), further comprising a first layer having first luminescent material (22) and a second layer having second

luminescent material (19), wherein the first luminescent material may be controlled to be illuminated to display information and the second luminescent material may be controlled to be illuminated to mask spaces in the first luminescent material (see col.6,lines 12 to 32).

20. Regarding claim 20, Tanabe inherently teaches a display device (Fig.7), wherein all of a display background can be controlled to be illuminated by luminescent material (see col.6,lines 12 to 32).

21. Regarding claim 21, Tanabe teaches a display device (Fig.7), further comprising, a first layer having a first electrode 28, a second layer, behind the first layer, having luminescent material 22 , a third layer, behind the second layer, having a second electrode 26, a fourth layer, behind the third layer, having luminescent material 19, and a fifth layer behind the fourth layer, having a third electrode 18 (see col.8 for description of figure numerals).

22. Regarding Claim 22, Tanabe teaches a display device (Fig.7) for use in an automobile, comprising: a first electroluminescent active element 22 located in a first plane and a second electroluminescent active element 19 located in a second plane different than the first plane (col.8).

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5416494 teaches segmented electrodes with hollow areas between them.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fatima Farokhrooz whose telephone number is (571)-272-6043. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fatima N Farokhrooz/

Examiner, Art Unit 2889

/TOAN TON/
Supervisory Patent Examiner, Art Unit 2889

Karabi Guharay Primary Examiner